



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,799	11/02/2001	Richard M. Podhajny	525.1023	4799

22856 7590 08/26/2003

MUSERLIAN, LUCAS AND MERCANTI, LLP  
600 THIRD AVENUE  
NEW YORK, NY 10016

EXAMINER

YOUNG, MICAH PAUL

ART UNIT PAPER NUMBER

1615

DATE MAILED: 08/26/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/003,799

Applicant(s)

PODHAJNY, RICHARD M.

Examiner

Micah-Paul Young

Art Unit

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 23-31 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-31 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s): \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 1615

### DETAILED ACTION

**Acknowledgment of Papers Received:** Amendment filed 6/26/03.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 23 – 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niira et al (4,938,958 and 5,556,699) in view of Quick et al (USPN 4,595,611) and Lindgren et al (USPN 5,603,997). The claims are drawn to a polymeric packaging material with antimicrobial properties. The claims recite that on at least one surface of the material there is a layer comprising an antimicrobial zeolite composition, comprising from about 0.1 to 5% of the coating layer. Claims 27 – 29 further limit the polymeric material. Claim 31 recite the thickness of the coating layer.

Art Unit: 1615

4. Niira et al ('958) discloses an antimicrobial zeolite composition and resin comprising said composition. The resin composition comprises a hydrophobic polymer including polyesters, polyamides and polyvinyl chlorides (col. 4, lin. 24 – 33). The zeolite composition can be comprised of various metal ions including silver and copper (col. 3, lin. 5 – 15). The resin is prepared either by incorporating the zeolite composition within the resin or coating it on the surface of the plastics, and is present in the coating in a concentration from 0.1 to 3% wt (col. 34 – 45). The invention can be incorporated into and applied in the paper making arts including paper packaging (col. 5, lin. 4 – 20). Also, as well known in the art, zeolites can vary in particle size from 1 – 5 microns depending on which particular type are being used (col. 5, lin. 25 – 39).

Niira et al ('699) discloses an antimicrobial zeolite coating film. The film can be incorporated into or on, resins and polymers such as polyester (col. 4, lin. 24 – 44). The reference discloses that coating films containing silver have a concentration from 0.1-5% (col. 3, lin. 24-44). The coating film can be as thick as 3 – 6 microns when applied to the surface of a substrate (col. 4, lin. 59 – 65). The coatings can be used in food packaging materials (Abstract).

The reference teaches many essential elements of the claimed invention. The reference however lacks a teaching of the pore size of the zeolites composition, and an explicit disclosure of the thickness of the applied antibacterial zeolite composition. Also the reference is silent to the orientation of the applied zeolite composition. Also the reference is silent to whether the polyester is sulfonated or not.

With regard to the orientation of the coating layer (discontinuous, continuous), it is the position of the examiner that the limitation is non-critical to the patentability of the invention. It is also the position of the examiner that the orientation of the layer (discontinuous or continuous)

Art Unit: 1615

would be well within the level of ordinary skill in the art to adjust. It would be obvious to a skilled artisan to apply the layer in whichever pattern best suited the application of the packaging material. These two limitations can be achieved through routine experimentation, and modification by those of ordinary skill in the art.

With regard to the pore size of the zeolite it is the position of the examiner that such limitations do not impart patentability over the prior art. Applicant has expressed in the specification that the limitations such as particle size and pore size are merely the preferred embodiments, and are hence non-critical to the overall patentability of the invention. When taken into consideration that both Niira references achieve the same goal of a coated polymer resin with antimicrobial qualities, the particular limitations such as particle size, and pore size are non-critical and would be obvious to a skilled artisan. Barring a showing of unexpected results regarding the pore size of the claimed invention, the claimed invention cannot be deemed patentably distinct over the prior art.

With regard to the polyester of Niira, the reference suggests the use of polyester, yet does not disclose if the polyester is sulfonated. Quick et al discloses a sulfonated polyester resin, which can be formed into packaging material for food products (Abstract). Though the selection of sulfonated polyester is well within the level of ordinary skill in the art, Quick established that sulfonated polyesters are known to be useful in food packaging materials (examples).

With regard to the hydrophobicity of the zeolite-coating compound, it is within the level of skill in the art to prepare a hydrophobic coating composition. Also the application and use of such coatings are known in the art as seen in Lindgren et al (Abstract). In the art of food

Art Unit: 1615

packaging preparation hydrophobic metallic zeolite compositions are used to repel water and reduce mildew on the resulting packaging material (col. 5, lin. 13 – 47).

With regard to claim 34, which is dependent from a non-elected group and recites that the packaging material is made by a particular method, this claim is deemed a product-by-process claim and does not distinguish the claim from the prior art. The prior art provides a composition with identical components, although produced by a different process; the burden is shifted to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. See *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

With these things in mind one of ordinary skill in the art would have been motivated to combine the teachings of the of the prior art. A skilled artisan would have been motivated to combine the use the polyester of Quick with a hydrophobic metallic zeolite composition suggested and taught by both Niira ('699 and/or '958) and Lindgren in order to impart antibacterial and water repellant properties on a possible packaging material. It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teachings as such with an expected result of an antimicrobial, water repellant polymeric material useful for food packaging.

### ***Response to Arguments***

1. Applicant's arguments filed 6/26/03 have been fully considered but they are not persuasive. Applicant argues that:
  - a. The Niira references ('669 and '958) neither disclose nor disclose coating procedures or means of combining antibiotic films with packaging materials.

Art Unit: 1615

- b. The supporting references (Quick et al, and Lindgren et al) do not remedy the shortcomings of Niira and in fact do not teach the release of metal ions.

With regard to argument a., the examiner directs applicant to page 3 of the specification where applicant discusses the coating methods disclosed by the '699 patent. Applicant argues in the response that no coating steps, or addition steps are disclosed by Niira, yet establishes that the '699 Niira patent discloses laminated antimicrobial films. These films have suitable use in packaging materials (col. 6, lin. 45 – 51). With regard to the '958 Niira reference, it is disclosed that the antibiotic zeolites can be coated on the surface of the resin (col. 4, lin. 35 – 37). These coatings having the antimicrobial zeolites incorporated by kneading or surface coating can be used in packaging materials (col. 5, lin. 8). Applicant argues that no suggestions are disclosed by the references to particular coating steps, yet applicant does not claim these steps. Applicant's claims are directed to a packaging material, where no process steps are recited. Packaging materials are disclosed by the Niira references where the antimicrobial zeolites composition can be present on the surface. Barring a quantitative showing of patentable distinction, the claims will remain obviated by the prior art. Applicant claims that the coating is printed to the surface of the polymer. Printing and other application techniques can be determined through routine experimentation to determine the best means of application. Applicant is invited to provide further documentation, which distinguishes the instant coating from the prior art. The specification is drawn to very specific coating compositions, yet the claims are broad. Applicant is invited to include further limitations, which would distinguish over the prior art.

Also with regard to the pore size, it is the position of the examiner that such a limitation is non-critical to the patentability of the instant claims, where the other limitations have been met

Art Unit: 1615

with regard to the particle size, type of zeolites, etc. Applicant is invited to provide evidence that the instant invention differs from that of the prior art in a patentably distinguishable way.

2. With regard to argument b., the supporting references art provided for support and to show the level of skill in the art. Quick is provided to show that the use of sulfonated polyesters is well known in the art, as well as providing coatings for them. Lindgren is provided to show that hydrophobic coatings are well known in the food packaging arts in order to reduce mildew. Further, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

#### ***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



Art Unit: 1615

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Micah-Paul Young whose telephone number is 703-308-7005.


The examiner can normally be reached on M-F 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Micah-Paul Young  
Examiner  
Art Unit 1615

MP Young

  
THURMAN K. PAGE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600